

II. Listing of Claims

1-55. (Canceled).

56. (Previously presented) An isolated polypeptide comprising an amino acid sequence selected from the group consisting of:

- a. an amino acid sequence having at least 70% sequence identity to the amino acid sequence of SEQ ID NO:29; and
- b. an amino acid sequence having at least 70% sequence identity to a fragment of the amino acid sequence of SEQ ID NO:29 that binds to *B. anthracis* bacteria,

where the polypeptide binds to *B. anthracis* bacteria.

57. (Previously presented) The isolated polypeptide of claim 56, where the amino acid sequence has at least 95% sequence identity to the amino acid sequence of SEQ ID NO:29.

58. (Previously presented) The isolated polypeptide of claim 56, where the amino acid sequence consists of a peptide fragment of the amino acid sequence of SEQ ID NO:29 that binds to *B. anthracis* bacteria.

59. (Previously presented) The isolated polypeptide of claim 56, where the isolated polypeptide consists of the amino acid sequence of SEQ ID NO:29.

60. (Previously presented) The isolated polypeptide of claim 56, where the isolated polypeptide is a fusion protein further comprising a heterologous polypeptide.

61. (Previously presented) The isolated polypeptide of claim 56, where the isolated polypeptide further comprises a detectable reporter molecule or atom.

62. (Previously presented) The isolated polypeptide of claim 61, where the reporter molecule or atom is selected from the group consisting of: a fluorescent molecule, an enzyme that creates an optical signal, a chemilumiphore, a microparticle and a radioactive atom.

63. (Previously presented) The isolated polypeptide of claim 56, where the isolated polypeptide is a fusion protein comprising a green fluorescent protein (GFP) and the amino acid.

64. (Previously presented) The isolated polypeptide of claim 63, where the GFP-Gp14 fusion protein binds to *B. anthracis* in the presence of a culture of *B. anthracis* and *B.*

cereus comprising a concentration of *B. cereus* ATCC-4342 that is up to 10,000-fold greater than the concentration of *B. anthracis*.

65. (Previously presented) The isolated polypeptide of claim 56, where the isolated polypeptide comprises a pyridoxal-phosphate binding domain.
66. (Previously presented) A composition comprising an isolated polypeptide, the isolated polypeptide comprising an amino acid sequence encoded by the open reading frame 14 of the polynucleotide sequence at positions 11,829-13,319 of SEQ ID NO:1, where the polypeptide binds to *B. anthracis* bacteria.
67. (Previously presented) The composition of claim 66, where the isolated polypeptide is a fusion protein further comprising a heterologous polypeptide.
68. (Previously presented) The isolated polypeptide of claim 66, where the isolated polypeptide further comprises a detectable reporter molecule or atom.
69. (Previously presented) The isolated polypeptide of claim 68, where the reporter molecule or atom is selected from the group consisting of: a fluorescent molecule, an enzyme that creates an optical signal, a chemilumiphore, a microparticle and a radioactive atom.
70. (Previously presented) The composition of claim 66, where the isolated polypeptide is a fusion protein comprising a green fluorescent protein (GFP) and the amino acid.
71. (Previously presented) The composition of claim 66, where the polypeptide comprises a pyridoxal-phosphate binding domain.

72-75. (Canceled).